

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: Glenn Dranoff, Jan Schmollinger, Stephen F. Hodi, and Joseph Mollick  
Application No.: 09/762,577                      Group No.: 1642  
Filed: August 6, 1999                      Examiner: Davis, Minh Tam  
For: Tumor Antigens and Uses Thereof

**Mail Stop Issue Fee**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria VA 22313-1450**

**RESPONSE TO “NOTICE TO FILE CORRECTED APPLICATION PAPERS”**

1. A copy of the “NOTICE TO FILE CORRECTED APPLICATION PAPERS” mailed for this application on May 7, 2007 is attached.
2. In response to the requirements of the NOTICE applicant submits herewith:
  - a) Response to Notice to File Corrected Application Papers;
  - b) Twenty three (23) sheets of corrected formal drawings; and
  - c) Amendment to the specification.

Date: June 20, 2007

/Barbara J. Carter, #52,703/

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# UNITED STATES PATENT AND TRADEMARK OFFICE

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## DOCKETED

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/762,577

08/29/2002

Glenn Dranoff

50059/005002

5254

2101 7590 05/07/2007  
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### RECEIVED

MAY 09 2007

Bromberg & Sunstein, LLP

EXAMINER
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DAVIS, MINH TAM B

ART UNIT	PAPER NUMBER
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1642

MAIL DATE	DELIVERY MODE
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05/07/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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MAY 09 2007

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Commissioner for Patents  
United States Patent and Trademark Office  
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Alexandria, VA 22313-1450  
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Application No. : 09/762,577  
Applicant : Dranoff et al.  
Filing Date : 8/29/02  
Date Mailed : 5/7/07

## NOTICE TO FILE CORRECTED APPLICATION PAPERS

### *Notice of Allowance Mailed*

This application has been accorded an Allowance Date and is being prepared for issuance. The application, however, is incomplete for the reasons below.

Applicant is given 60 days from the mail date of this Notice within which to correct the informalities indicated below. If the informality pertains to the abstract, specification (including claims) or drawings, the informality must be corrected with an amendment in compliance with 37 CFR 1.121 (or, if the application is a reissue application, 37 CFR 1.173). Such an amendment may be filed after payment of the issue fee if limited to correction of informalities noted herein. See Waiver of 37 CFR 1.312 for Documents Required by the Office of Patent Publication, 1280 Off. Gaz. Patent Office 918 (March 23, 2004). In addition, if the informality is not corrected until after payment of the issue fee, for purposes of 35 U.S.C. 154(b)(1)(iv), "all outstanding requirements" will be considered to have been satisfied when the informality has been corrected. A failure to reply will result in the application being ABANDONED. **This period for reply is NOT extendable under 37 CFR 1.136(a).**

Please see attachment.

*A copy of this notice **MUST** be returned with the reply. Please address response to  
"Mail Stop Issue Fee, Commissioner for Patents,  
P.O. Box 1450, Alexandria, VA 22313-1450".*

Dale G. Olson  
Office of Patent Publication  
Phone: 703-308-9250 ext.122

Application No. 09/762,577 Drawings filed 8-29-02

IDENTIFICATION OF DRAWING DEFICIENCIES

- ☐ There is a hole or the image thereof within the illustration. FIG(s) \_\_\_\_\_
- ☒ The character of the lines, numbers and letters is poor. FIG(s) 4, 6, 12, 14, 15
- ☐ The illustration is penetrated or traversed by a solid or broken line that is not intended to be part of the drawing, such as a dark line caused by a flaw in the copying process. FIG(s) \_\_\_\_\_
- ☒ An ink stamp or an image obscures part of the illustration. FIG(s) 12, 16
- ☐ The drawing is marred by black smudges, obliterations, or fax/copier marks. FIG(s) \_\_\_\_\_
- ☐ Figure numbers are duplicated or missing. FIG(s) \_\_\_\_\_
- ☐ Numbers, letters, or reference characters in the drawing have been crossed out by hand or are illegibly handwritten. FIG(s) \_\_\_\_\_
- ☐ The drawing's background shows that the original drawing was made on graph paper or other paper with a pattern or decoration. FIG(s) \_\_\_\_\_
- ☒ The FIG. number label is placed in a location that causes the drawing to be read upside down. FIG(s) 1, 2, 3, 4, 9, 10,
- ☒ Data, a reference number, or part of the drawing is truncated or missing. FIG(s) 2
- ☒ The drawing is continued onto a second page (or more) without proper labeling under 37 CFR 1.84(u)(1). FIG(s) 17
- ☐ The drawing and/or the FIG. label contain(s) foreign language. FIG(s) \_\_\_\_\_
- ☐ Color drawings are present in this application but the following 37 CFR 1.84(a) requirements have not been met\*:
- ☐ Petition filed
  - ☐ Petition fee
  - ☐ 3 sets of color drawings
  - ☐ Color drawing paragraph

\*If color drawings are not elected, then applicant **must respond** so stating. Also, references to color drawings in the specification, if any, must be amended.

COMMENTS:

Application No. 09/762,577  
Filed: August 6, 1999  
Attorney Docket: 2486/109

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Dranoff et al.	Att'y Docket:	2486/109
App. No.:	09/762,577	Art Unit:	1642
Intl. Filing Date:	August 6, 1999	Examiner:	Minh-Tam Davis
For:	Tumor Antigens and Uses Thereof	Date:	June 20, 2007
		Conf. No.:	5254

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**Response to Notice to File Corrected Application Papers of May 7, 2007**

Dear Sir:

Applicants would like to thank the Ms. Kimberly Terrell, Manager of the Patent Publication Office for the courtesy of a telephone call on June 19, 2007 and the useful suggestions offered with respect to the corrected drawings and amendment to the specification regarding same. Further to that conversation, and in response to the Notice to File Corrected Application Papers of May 7, 2007, Applicants submit this reply, and ask that the following Corrected Application Papers (corrected formal drawings and amendment to the specification) be entered.

**INDEX**

**Amendments/Specification** begin on p. 2 of this paper.

**Remarks** begin on p. 4 of this paper.

**Corrected Formal Drawings** are attached immediately after this paper.

Amendments to the Specification

Please replace the section of the Specification titled "Brief Description of the Drawings" found on p. 27, line 16 through p. 28, line 28 with the amended "Brief Description of the Drawings" shown below.

Brief Description of the Drawings

Fig. 1 is a graph showing the relative reactivity of sixty normal serum samples against a MAIAP-GST fusion protein.

Fig. 2 is a graph showing that sera from 4 out of 48 vaccinated melanoma patients and 5 out of 15 vaccinated lung cancer patients show relatively high reactivity against MAIAP.

Fig. 3 is a graph showing that sera from 0 out of 15 prostate cancer patients show higher than average reactivity against MAIAP.

Fig. 4 is a graph showing a time course of the relative levels of anti-MAIAP antibodies in the serum of a melanoma patient (K030) before, during, and after vaccination with GM-CSF-secreting autologous tumor cells.

Fig. 5 is a diagram of cell cycle analyses showing that transfection of MAIAP into A293 cells increases their resistance to radiation.

Fig. 6 is a diagram showing the full-length sequences of the TRAAM<sub>U397</sub> cDNA clone (SEQ ID NO:17).

Fig. 7 is a diagram showing the long open reading frame of the TRAAM<sub>U397</sub> cDNA clone (TRAAM<sub>U397</sub>-ORF1:SEQ ID NO: 18) which contains the PSET peptide.

Fig. 8 is a diagram showing the short open reading frame of the TRAAM<sub>U397</sub> cDNA clone (TRAAM<sub>U397</sub>-ORF2:SEQ ID NO: 19) which contains the TRAM peptide.

Fig. 9 is a series of graphs showing the results of ELISA assays using anti-PSET antiserum or anti-TRAM antiserum and PSET, TRAM, and MUC-1 peptides as antigen.

Fig. 10 is a graph showing results of ELISA assays using anti-MUC-1 antiserum and PSET, TRAM, and MUC-1 peptides as antigen.

Fig. 11 (A-H) is a series of photomicrographs of tissues from patients before and after vaccination with irradiated GM-CSF-secreting melanoma cells.

Fig. 12 is a chart showing that vaccination with irradiated GM-CSF-secreting melanoma cells stimulates cytokine production by peripheral blood lymphocytes.

Fig. 13 is a graph demonstrating the potent cytotoxicity of tumor infiltrating lymphocytes from a vaccinated patient.

Fig. 14 is a chart showing cytokine production by tumor infiltrating lymphocytes from a vaccinated patient.

Fig. 15 is a Western blot demonstrating that vaccination with irradiated GM-CSF-secreting melanoma cell stimulates anti-melanoma antibody responses.

Fig. 16 is a chart showing that vaccination with irradiated GM-CSF-secreting melanoma cells stimulates anti-melanoma antibody responses.

Fig. 17 (A-K) is a set of DNA sequences that encode tumor antigens and tumor antigen polypeptide fragments of the invention, and their encoded polypeptides (SEQ ID NOs: 1-16).

## **Remarks**

### Amendments to the Specification

Applicants have replaced the Brief Description of the Drawings starting on p. 27, line 16 continuing through p. 28, line 28 to amend the description of Fig. 17 to read "Fig. 17 (A-K)" to encompass and describe the eleven pages comprising this figure, thereby bringing the Specification into conformity with the attached Corrected Formal Drawings. Applicants respectfully submit that this change does not constitute addition of new matter as the substance of Figure 17 has not changed, it has merely been relabeled with consecutive capital letters for continuing pages, in compliance with 37 C.F.R. § 1.84(u)(1).

### Corrected Formal Drawings

In response to the Notice of File Corrected Application Papers of May 7, 2007, Applicants have prepared formal drawings, and at the same time, corrected the figures in compliance with 37 C.F.R. § 1.121(a) and 37 C.F.R. § 1.84(u)(1). Thus, figures 4, 6, 12, 14 and 15 were amended to improve the line, number and letter quality. Applicants have corrected Figures 12 and 16 to remove the ink/stamp interference with the substance of the figure. Applicants have corrected Figures 1-4, 9 and 10 so that the Figure number is oriented correctly on the page such that the Figures are no longer read upside down. Figure 2 has been corrected to enclose the top graph section, which was somehow cut off. This amendment is simply a format and drafting correction, it is not substantive in nature, so the correction does not constitute addition of new matter.

Finally, Figure 17 has been corrected to list the continuing pages with capital letters after the figure number, to comply with the requirements of 37 C.F.R. § 1.84(u)(1). Therefore, Figure 17 is now Figures 17A-K. As a consequence of this correction, the Specification was also amended in the Brief Description of the Drawings section to correspond to this drawing correction. As required by 37 C.F.R. § 1.121(d), a

Applicants respectfully submit that the application, its drawings, and all other related papers (assignments, powers of attorney) are in compliance with the Laws and



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Filed: August 6, 1999  
Attorney Docket: 2486/109

Rules of the USPTO and thus submit that upon payment of the issue fee, the patent is in condition to issue.

Applicants believe that no extension of time is required; however, in the event that the need for an extension under 37 C.F.R. §1.136 has been overlooked, Applicants hereby submit this conditional petition for an additional extension of time and request that the Examiner please charge any fees which may be due to deposit account number 19-4972. The Examiner is requested to telephone the undersigned if any outstanding issues remain, so that these matters may be resolved expeditiously.

Respectfully submitted,



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